



**ESI Figure S1:** Heterogeneity of the GSD-1G glass used for B isotope ratio determination. The raw B isotope ratios are shown for SRM 612 as the bracketing standard and GSD-1G as the bracketed unknown (a). NIST SRM 951 normalised isotope ratios show significant spatial variation compared with the reference analytical results from the bulk GSD-1G sample (b). In contrast, SRM 612 has a fairly uniform composition with deviations within an uncertainty of < 0.5%, indicating its suitability for use as a bracketing standard (see (a)). All errors are 2SD.